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1600

## RAW SEQUENCE LISTING

DATE: 11/20/2002

PATENT APPLICATION: US/09/591,279A

TIME: 13:06:04

Input Set : A:\KASII.txt

Output Set: N:\CRF4\11202002\I591279A.raw

3 <110> APPLICANT: DEHESH et al.

5 <120> TITLE OF INVENTION: Engineering Beta Ketoacyl ACP Synthase for Novel Substrate Specificity

7 <130> FILE REFERENCE: 16516.117

9 <140> CURRENT APPLICATION NUMBER: US 09/591,279A

10 <141> CURRENT FILING DATE: 2000-06-09

12 <150> PRIOR APPLICATION NUMBER: US 60/138,308

13 <151> PRIOR FILING DATE: 1999-06-09

15 <160> NUMBER OF SEQ ID NOS: 47

17 <170> SOFTWARE: PatentIn version 3.0

19 <210> SEQ ID NO: 1

20 <211> LENGTH: 36

21 <212> TYPE: DNA

22 <213> ORGANISM: Artificial Sequence

24 <220> FEATURE:

25 <221> NAME/KEY: misc\_feature

26 <222> LOCATION: ()..()

27 <223> OTHER INFORMATION: Oligonucleotide Primer I108F Sense

30 <400> SEQUENCE: 1

31 gtgccgcaat tggatccggg tttggcggcc tcggac 36

34 <210> SEQ ID NO: 2

35 <211> LENGTH: 36

36 <212> TYPE: DNA

37 <213> ORGANISM: Artificial Sequence

39 <220> FEATURE:

40 <221> NAME/KEY: misc\_feature

41 <222> LOCATION: ()..()

42 <223> OTHER INFORMATION: Oligonucleotide Primer I108F Antisense

45 <400> SEQUENCE: 2

46 gtccgagggc gccaaacccg gatccaattg cggcac 36

49 <210> SEQ ID NO: 3

50 <211> LENGTH: 42

51 <212> TYPE: DNA

52 <213> ORGANISM: Artificial Sequence

54 <220> FEATURE:

55 <221> NAME/KEY: misc\_feature

56 <222> LOCATION: ()..()

57 <223> OTHER INFORMATION: Oligonucleotide Primer I108L Sense

60 <400> SEQUENCE: 3

61 gtgccgcaat tggctccggg cttggaggcc tcggactgat cg 42

64 <210> SEQ ID NO: 4

65 <211> LENGTH: 42

66 <212> TYPE: DNA

67 <213> ORGANISM: Artificial Sequence

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69 <220> FEATURE:
70 <221> NAME/KEY: misc_feature
71 <222> LOCATION: ()..()
72 <223> OTHER INFORMATION: Oligonucleotide Primer I108L Antisense
75 <400> SEQUENCE: 4
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79 <210> SEQ ID NO: 5
80 <211> LENGTH: 36
81 <212> TYPE: DNA
82 <213> ORGANISM: Artificial Sequence
84 <220> FEATURE:
85 <221> NAME/KEY: misc_feature
86 <222> LOCATION: ()..()
87 <223> OTHER INFORMATION: Oligonucleotide Primer A193I Sense
90 <400> SEQUENCE: 5
91 gcaggtggcg ccgagaaaat cagtacgccg ctgggc 36
94 <210> SEQ ID NO: 6
95 <211> LENGTH: 35
96 <212> TYPE: DNA
97 <213> ORGANISM: Artificial Sequence
99 <220> FEATURE:
100 <221> NAME/KEY: misc_feature
101 <222> LOCATION: ()..()
102 <223> OTHER INFORMATION: Oligonucleotide Primer A193I Antisense
105 <400> SEQUENCE: 6
106 gccagcggc gtactgattt tctcggcgcc acctg 35
109 <210> SEQ ID NO: 7
110 <211> LENGTH: 37
111 <212> TYPE: DNA
112 <213> ORGANISM: Artificial Sequence
114 <220> FEATURE:
115 <221> NAME/KEY: misc_feature
116 <222> LOCATION: ()..()
117 <223> OTHER INFORMATION: Oligonucleotide Primer A193M Sense
120 <400> SEQUENCE: 7
121 ggtggcgcgag agaaaatgag tactccgctg ggcgttg 37
124 <210> SEQ ID NO: 8
125 <211> LENGTH: 37
126 <212> TYPE: DNA
127 <213> ORGANISM: Artificial Sequence
129 <220> FEATURE:
130 <221> NAME/KEY: misc_feature
131 <222> LOCATION: ()..()
132 <223> OTHER INFORMATION: Oligonucleotide Primer A193M Antisense
135 <400> SEQUENCE: 8
136 caacgcccg cggagtactc attttctctg cgccacc 37
139 <210> SEQ ID NO: 9
140 <211> LENGTH: 50
141 <212> TYPE: DNA

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142 <213> ORGANISM: Artificial Sequence
144 <220> FEATURE:
145 <221> NAME/KEY: misc_feature
146 <222> LOCATION: ()..()
147 <223> OTHER INFORMATION: Oligonucleotide Primer I108A,L111A, I114A Sense
150 <400> SEQUENCE: 9
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154 <210> SEQ ID NO: 10
155 <211> LENGTH: 50
156 <212> TYPE: DNA
157 <213> ORGANISM: Artificial Sequence
159 <220> FEATURE:
160 <221> NAME/KEY: misc_feature
161 <222> LOCATION: ()..()
162 <223> OTHER INFORMATION: Oligonucleotide Primer I108A,L111A, I114A Antisense
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169 <210> SEQ ID NO: 11
170 <211> LENGTH: 28
171 <212> TYPE: DNA
172 <213> ORGANISM: Artificial Sequence
174 <220> FEATURE:
175 <221> NAME/KEY: misc_feature
176 <222> LOCATION: ()..()
177 <223> OTHER INFORMATION: Oligonucleotide Primer L111A Sense
180 <400> SEQUENCE: 11
181 gggattggcg gcgcggaact gatcgaag          28
184 <210> SEQ ID NO: 12
185 <211> LENGTH: 28
186 <212> TYPE: DNA
187 <213> ORGANISM: Artificial Sequence
189 <220> FEATURE:
190 <221> NAME/KEY: misc_feature
191 <222> LOCATION: ()..()
192 <223> OTHER INFORMATION: Oligonucleotide Primer L111A Antisense
195 <400> SEQUENCE: 12
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199 <210> SEQ ID NO: 13
200 <211> LENGTH: 34
201 <212> TYPE: DNA
202 <213> ORGANISM: Artificial Sequence
204 <220> FEATURE:
205 <221> NAME/KEY: misc_feature
206 <222> LOCATION: ()..()
207 <223> OTHER INFORMATION: Oligonucleotide Primer F133A Sense
210 <400> SEQUENCE: 13
211 gatcagccca ttcgcggtac cgtcaacgat tgtg          34
214 <210> SEQ ID NO: 14
215 <211> LENGTH: 34

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216 <212> TYPE: DNA
217 <213> ORGANISM: Artificial Sequence
219 <220> FEATURE:
220 <221> NAME/KEY: misc_feature
221 <222> LOCATION: ()..()
222 <223> OTHER INFORMATION: Oligonucleotide Primer F133A Antisense
225 <400> SEQUENCE: 14
226 cacaatcggtt gacggtaccg cgaatgggct gatc 34
229 <210> SEQ ID NO: 15
230 <211> LENGTH: 32
231 <212> TYPE: DNA
232 <213> ORGANISM: Artificial Sequence
234 <220> FEATURE:
235 <221> NAME/KEY: misc_feature
236 <222> LOCATION: ()..()
237 <223> OTHER INFORMATION: Oligonucleotide Primer L197A Sense
240 <400> SEQUENCE: 15
241 gagaaagcca gtactccggc gggcggttggg gg 32
244 <210> SEQ ID NO: 16
245 <211> LENGTH: 32
246 <212> TYPE: DNA
247 <213> ORGANISM: Artificial Sequence
249 <220> FEATURE:
250 <221> NAME/KEY: misc_feature
251 <222> LOCATION: ()..()
252 <223> OTHER INFORMATION: Oligonucleotide Primer L197A Antisense
255 <400> SEQUENCE: 16
256 ccaccaacgc ccgccggagt actggctttc tc 32
259 <210> SEQ ID NO: 17
260 <211> LENGTH: 56
261 <212> TYPE: DNA
262 <213> ORGANISM: Artificial sequence
264 <220> FEATURE:
265 <221> NAME/KEY: misc_feature
266 <222> LOCATION: ()..()
267 <223> OTHER INFORMATION: Self annealed oligonucleotide primer
270 <400> SEQUENCE: 17
271 cgcgatttaa atggcgcgcc ctgcaggcgg ccgcctgcag ggcgcgccat ttaaat 56
274 <210> SEQ ID NO: 18
275 <211> LENGTH: 366
276 <212> TYPE: DNA
277 <213> ORGANISM: Cuphea hookeriana
279 <400> SEQUENCE: 18
280 ctgagatctg tcgacatggc gaccgcttct cgcattggttg cgtcccccttt ctgtacgtgg 60
282 ctgtagctg catgcatgcc cacttcatcc gacaacgacc cacgttccct ttcccacaag 120
284 cggctccgcc tctcccgtag ccggaggact ctctcctccc attgctccct ccgcggatcc 180
286 accttccaat gctcgcgtcc ttgcaaccag caacgcttcc tcggggataa cggattcgct 240
288 tccctcttcg gatccaagcc tcttcgttca aatcgcggcc acctgaggct cggccgcact 300
290 tccatttcg gggaggtcat ggctgtggct atgcaacctg cacaggaagt ctccacaaga 360

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292 tctgtc
295 <210> SEQ ID NO: 19
296 <211> LENGTH: 431
297 <212> TYPE: PRT
298 <213> ORGANISM: Arabidopsis thaliana
300 <400> SEQUENCE: 19
302 Ile Ser Ala Ser Ala Ser Thr Val Ser Ala Pro Lys Arg Glu Thr Asp
303 1 5 10 15
305 Pro Lys Lys Arg Val Val Ile Thr Gly Met Gly Leu Val Ser Val Cys
306 20 25 30
308 Gly Asn Asp Val Asp Ala Tyr Tyr Glu Lys Leu Leu Ser Gly Glu Ser
309 35 40 45
311 Gly Ile Ser Leu Ile Asp Arg Phe Asp Ala Ser Lys Phe Pro Thr Arg
312 50 55 60
314 Phe Gly Gly Gln Ile Arg Gly Phe Ser Ser Glu Gly Tyr Ile Asp Gly
315 65 70 75 80
317 Lys Asn Glu Arg Arg Leu Asp Asp Cys Leu Lys Tyr Cys Ile Val Ala
318 85 90 95
320 Gly Lys Lys Ala Leu Glu Ser Ala Asn Leu Gly Gly Asp Lys Leu Asn
321 100 105 110
323 Thr Ile Asp Lys Arg Lys Ala Gly Val Leu Val Gly Thr Gly Met Gly
324 115 120 125
326 Gly Leu Thr Val Phe Ser Glu Gly Val Gln Asn Leu Ile Glu Lys Gly
327 130 135 140
329 His Arg Arg Ile Ser Pro Phe Phe Ile Pro Tyr Ala Ile Thr Asn Met
330 145 150 155 160
332 Gly Ser Ala Leu Leu Ala Ile Asp Leu Gly Leu Met Gly Pro Asn Tyr
333 165 170 175
335 Ser Ile Ser Thr Ala Cys Ala Thr Ser Asn Tyr Cys Phe Tyr Ala Ala
336 180 185 190
338 Ala Asn His Asn His Arg Gly Glu Ala Asp Met Met Ile Ala Gly Gly
339 195 200 205
341 Thr Glu Ala Ala Ile Ile Pro Ile Gly Leu Gly Gly Phe Val Ala Cys
342 210 215 220
344 Arg Ala Leu Ser Gln Arg Asn Asp Asp Pro Gln Thr Ala Ser Arg Pro
345 225 230 235 240
347 Trp Asp Lys Ala Arg Asp Gly Phe Val Met Gly Glu Gly Ala Gly Val
348 245 250 255
350 Leu Val Met Glu Ser Leu Glu His Ala Met Lys Arg Gly Ala Pro Ile
351 260 265 270
353 Val Ala Glu Tyr Leu Gly Gly Ala Val Asn Cys Asp Ala His His Met
354 275 280 285
356 Thr Asp Pro Arg Ala Asp Gly Leu Gly Val Ser Ser Cys Ile Glu Arg
357 290 295 300
359 Cys Leu Glu Asp Ala Gly Val Ser Pro Glu Glu Val Asn Tyr Ile Asn
360 305 310 315 320
362 Ala His Ala Thr Ser Thr Leu Ala Gly Asp Leu Ala Glu Ile Asn Ala
363 325 330 335
365 Ile Lys Lys Val Phe Lys Ser Thr Ser Gly Ile Lys Ile Asn Ala Thr

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RAW SEQUENCE LISTING ERROR SUMMARY  
PATENT APPLICATION: US/09/591,279A

DATE: 11/20/2002  
TIME: 13:06:05

Input Set : A:\KASII.txt  
Output Set: N:\CRF4\11202002\I591279A.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:22; Xaa Pos. 15  
Seq#:36; Xaa Pos. 53

**VERIFICATION SUMMARY**

DATE: 11/20/2002

PATENT APPLICATION: **US/09/591,279A**

TIME: 13:06:05

Input Set : **A:\KASII.txt**

Output Set: **N:\CRF4\11202002\I591279A.raw**

L:557 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22 after pos.:0

L:1807 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:36 after pos.:48